

Listing of Claims:

1. (Previously Presented) A system for heating a fluid for delivery into a body of a patient comprising:
 - an elongated flexible fluid delivery-line comprising:
 - a tube for communicating a fluid;
 - three or more thermal sensors, at least one thermal sensor positioned approximate to each end of the tube and at least one thermal sensor positioned in between the ends of the tube;
 - and
 - a heating element positioned proximate a surface of the tube to heat fluid within the tube, the heating element being controlled based on temperature data from the three or more thermal sensors to generate two or more determined heat gradients through the fluid within the tube.
2. (Original) The system according to claim 1, further comprising a controller.
3. (Previously Presented) The system according to claim 1, wherein the heating element is spaced apart from an outer surface of the tube.
4. (Original) The system according to claim 1, wherein a wall of the tube comprises a thermal medium for distributing heat received by the outer surface of the tube from the heating element.
5. (Original) The system according to claim 1, wherein the heating element surrounds the tube.
6. (Original) The system according to claim 1, wherein the heating element spirally surrounds the tube.

7. (Original) The system according to claim 1, wherein the heating element comprises a plurality of heating elements surrounding the tube and having a length positioned substantially parallel to a length of the tube.
8. (Original) The system according to claim 1, wherein the heating element comprises a plurality of heating elements, each circumferentially surrounding the tube and spaced apart from one another along a length of the tube.
9. (Original) The system according to claim 1, wherein the heating element is surrounded by a thermal medium.
10. (Previously Presented) The system according to claim 9, wherein the thermal medium comprises a fluid.
11. (Previously Presented) The system according to claim 1, wherein the fluid delivery-line includes a bag spike positioned at one end.
12. (Previously Presented) The system according to claim 1, wherein the fluid delivery-line includes a transfusion needle and/or a luer lock at one end.
13. (Previously Presented) The system according to claim 2, wherein the heating element and/or the three or more thermal sensors are in electrical contact with the controller.
14. (Previously Presented) The system according to claim 2, wherein the controller is connected to a power source.
15. (Previously Presented) The system according to claim 14, wherein the power source is

selected from the group consisting of: a one-time use battery pack, a rechargeable battery pack, AC power, and DC power.

16. (Original) The system according to claim 1, wherein the tube is sterile prior to use.

17. (Original) The system according to claim 2, wherein the controller provides an electrical current to the heating element.

18. (Previously Presented) The system according to claim 17, wherein the controller controls the temperature of the tube by sensing a temperature corresponding to a temperature of fluid within the tube and adjusting the amount of current supplied to the heating element.

19. (Original) The system according to claim 2, further comprising a heat element connector and/or a thermal sensor connector for connecting the heat element and thermal sensor, respectively, to corresponding connectors on the controller.

20. (Original) The system according to claim 1, further comprising a valve.

21. (Previously Presented) The system according to claim 20, wherein the valve comprises a temperature actuated valve that opens upon the temperature of the fluid within the tube reaching a predetermined value.

22. (Previously Presented) The system according to claim 1, further comprising a metering means for determining a flow rate of fluid traversing through the tube.

23. (Previously Presented) The system according to claim 1, further comprising a heat-conductive member having a first portion placed adjacent an interior portion of the tube and a second portion placed proximate the heating element, wherein the heat-conductive material

transfers heat from the heating element to the interior portion of the tube.

24. (Previously Presented) The system according to claim 1, further comprising an insulative tube, wherein the tube is positioned within the insulative tube.

25. (Previously Presented) The system according to claim 24, further comprising a thermal medium positioned between the tube and the insulative tube.

26. (Previously Presented) The system according to claim 25, wherein the thermal medium envelops the heating element.

27-30. (Canceled)

31. (Previously Presented) A system for heating a fluid for delivery into a body of a patient comprising:

- a controller; and

- an elongated flexible fluid delivery line having a first end for receiving fluid from a fluid source and delivering the fluid to a destination, the fluid delivery line comprising:

- an insulative tube;

- a fluid delivery tube positioned within the insulative tube, the fluid delivery tube for communicating a fluid;

- three or more thermal sensors, at least one thermal sensor positioned proximate to each end of the fluid delivery tube and at least one thermal sensor positioned in between the ends of the tube;

- a heating element positioned proximate the fluid delivery tube, the heating element being controlled based on temperature data from the three or more thermal sensors to generate two or more determined heat gradients through the fluid within the tube; and

a thermal medium positioned between the insulative tube and the fluid delivery tube.

32. (Previously Presented) The system according to claim 1, wherein the fluid delivery-line delivers the fluid to a destination at a constant flow rate.